

SARZHEVSKAYA, V.P.; KORNEV, K.A.; SMIRNOVA-ZAMKOVA, S.Ye.

Polyamides with aromatic and heterocyclic links in the chain.  
Part 9: Polyamides based on furan-2,5- and thiophene-2,5-dicarboxylic  
acids and some aliphatic-aromatic diamines. Ukr.khim.zhur. 30 no.  
499-502 '64. (MIRA 18:4)

1. Institut khimii polimerov i monomerov AN UkrSSR.

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CIA-RDP86-00513R001447220009-2

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001447220009-2"

GURINOVICH, G.P.; SARZHEVSKIY, A.M.

Photoelectric equipment for measurements of the polarization  
[with summary in English]. Inzh.-fiz. zhur. 1 no.8:59-64 Ag '58.  
(MIRA 11:8)

1. Institut fiziki i matematiki AN BSSR, Minsk.  
(Photoelectric measurements) (Polarization (Light)--Measurement)

SOV/48-22-11-31/33

24(7)  
AUTHORS:

Barzhevskiy, A. M., Sevchenko, A. N.

TITLE: On the Polarization of the Luminescence of Phthalimides (O poliarizatsii lyuminestsentsii ftalimidov)

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya fizicheskaya, 1958, Vol 22, Nr 11, pp 1412-1416 (USSR)

ABSTRACT: A relation between luminescence polarization temperature and viscosity is given by the well-known formula by Levshin - Perren:

$$\frac{1}{P} = \frac{1}{P_0} + \left( \frac{1}{P_0} - \frac{1}{3} \right) \frac{kT}{\eta} \quad (1)$$

According to this formula the relationship between  $1/P$  and  $T/\eta$  is linear, and this was substantiated by the results obtained from all phthalimides investigated (Fig 1). The luminescence polarization decreases rapidly with rising temperature. Similar dependences were also found in all phthalimide derivatives which were studied. The dependence of the polarization upon the kind of solvent was also investigated (Fig 2). The information gained demonstrates that the formula by Levshin and Perren also applies to this class of phthalimides and that the correspondence

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SOV/48-22-11-31/33

## On the Polarization of the Luminescence of Phthalimides

between the molar and the molecular viscosity is maintained. This formula also offers a means of determining the volume of the molecule and the surrounding solvate shell. The molecular volumes of phthalimides were determined in various solvents and in their mixtures. The fluorometer due to Bonch-Bruyevich (Table 1) was used in the experiments. The molar volumes of the dissolved phthalimides considerably increase as compared to those in solid state. A similar solvation occurs also with other molecules. Fluorescein, thiocyanate 5 and chlorophyll were investigated in order to provide a check on the results obtained. Their molar volumes were determined by the diffusion method due to Marinesco (Ref 2). Measurements with these substances in identical solvents furnished a good accordance of the results. Contrary to this, the results presented by Gribkov and Zhevandrov (Ref 3), and by Zhevandrov and Nikolayev (Ref 4) which were obtained by the same method, do not agree, neither with each other nor with the results of this work. At the same time polarization spectra of 11 phthalimide derivatives were investigated. Polarization- and absorption spectra are reliable indicators of the chemical structure of a substance. The nature

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On the Polarization of the Luminescence of Phthalimides

of the elementary oscillator as determined by the method of  
I. I. Vavilov. As a practical example three straight lines are  
given for 4-amino-n-methyl phthalimides (Fig. 4). The data ob-  
tained for other phthalimides indicate a dipole character of  
absorption and emission. The authors express their gratitude to  
V. V. Zelinsky for furnishing preparations and to A. M. Bonch-  
Bruyevich, V. I. Shirokov, and G. A. Tishchenko for assistance  
with the measurements. There are 4 figures, 2 tables, and 9 ref-  
erences, 8 of which are Soviet.

ASSOCIATION: Institut fiziki i matematiki AN BSSR (Institute of Physics and  
Mathematics, Byelorussian SSR)

Card 3/3



24.3500

66584

SOV/51-7-5-14/21

AUTHORS: Gurinovich, G.P., Sarzhevskiy, A.M. and Sevchenko, A.N.

TITLE: On the Maximum Polarization of Luminescence in Complex Molecules

PERIODICAL: Optika i spektroskopiya, 1959, Vol 7, Nr 5, pp 668-676 (USSR)

ABSTRACT: The theory of polarized fluorescence predicts a maximum value  $P_0 = 0.5$  for polarization in isotropic solutions. In order to measure the maximum value of polarization it is necessary to eliminate the effect of Brownian rotational motion of molecules. This may be achieved in two ways: either by allowance for rotation of the molecule during the excited-state lifetime or by fixing the molecule (by placing it in a solid). The authors used both these methods to study polarization in the following phthalimide derivatives: 3-monomethylaminophthalimide, 3-monomethylamino-N-methylphthalimide, 3-amino phthalimide, 3-amino-N-methylphthalimide, 3,6-diamino-N-methylphthalimide. When the first method was employed glycerine was used as a solvent and its viscosity was varied by altering temperature. In the second method polymethyl methacrylate (Perspex) was used as a solvent. Solid solutions were prepared by dissolving phthalimide derivatives in monomethyl methacrylate and polymerizing it in the presence of 1.2% of benzoyl peroxide at 50-70°C. Uniform transparent samples were cut up from Perspex prepared in this way; each sample contained  $5 \times 10^{-6}$  g of a

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SOV/51-7-5-14/21

**On the Maximum Polarization of Luminescence in Complex Molecules**

phthalimide derivative in 1 cm<sup>3</sup>. The absorption spectra were recorded by means of an SF-4 spectrophotometer and the fluorescence spectra were recorded using a high speed diffraction monochromator. Polarization was measured using a technique described earlier by Gurinovich and Sevchenko (Ref 10); the error in polarization measurements amounted to 3-5%. The measured degrees of polarization along the absorption and fluorescence spectra are shown in Figs 1-3. It was found that when the frequencies of excitation, of fluorescence and of a purely electronic transition were equal, the value of  $P_o$  in all compounds approached 0.5 (50%). In all cases the dependence  $P_o = f(\nu_{fl})$  was a mirror image of the dependence  $P_o = f(\nu_{exc})$ , with the frequency of the purely electronic transition as the centre of symmetry. It is shown that the variations in the reported values of  $P_o$  and departures of  $P_o$  from its theoretical limit are due to vibrations in the ground and excited states of molecules. There are 5 figures, 2 tables and 15 references, 10 of which are Soviet, 2 French, 2 German and 1 Polish.

SUBMITTED: March 21, 1959

Card 2/2

4

66852

SOV/76-33-11-5/47

5.41.20

-5(4)

AUTHORS:

Sarzhevskiy, A. M., Sevchenko, A. N.

TITLE:

Luminescence Method for the Determination of the Volumes of the  
Solvate Envelopes of Molecules in Solutions

PERIODICAL:

Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 11, pp 2410-2413  
(USSR)

ABSTRACT:

The method mentioned in the title which is based on a study of the anisotropy of the photo luminescence of solutions is recommended. When a plane-polarized light beam passes through a solution, also plane-polarized radiation is induced by the anisotropy of the luminescent molecule of the system. The polarization of the photoluminescence is caused by the fact that the dissolved molecules have fixed axes along which there are primarily elementary oscillators present. The degree of polarization depends on the absorbing and emitting oscillators and, most of all, on the viscosity of the medium. Moreover it increases with rising viscosity. According to the theory of Smolukhovskiy and Einstein, a molecule of the volume  $V$  in a liquid of the viscosity  $\eta$  will turn within a short time  $\Delta t$  through the angle  $\Delta\varphi$ . When replacing  $\Delta t$  by the value  $T$  of the

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SOV/76-33-11-5/47

Luminescence Method for the Determination of the Volumes of the Solvate Envelopes of Molecules in Solutions

mean duration of excited luminescence an equation is obtained for the degree of polarization in dependence on viscosity, temperature, the molecule volume, and on other molecule parameters. This equation (2) was first proposed by V. L. Levshin (Ref 4) and later by F. Perrin (Perren). As the value  $\tau$  can be accurately measured with a fluorometer (Ref 5), equation (2) offers a new method for experimental determination of the volume of the solvate envelope. The method was tested in investigating fluorescein, rhodamine B, and chlorophyll. The values agreed with those of Marinesco (Ref 1) obtained by the diffusion method. In addition, phthalimide derivatives synthesized by V. V. Zelinskiy were investigated by the new method in various solvents and their mixtures (Tables 1,2). There are 2 tables and 7 references, 6 of which are Soviet.

ASSOCIATION: Akademiya nauk BSSR, Institut fiziki, Minsk (Academy of Sciences of the BSSR, Institute of Physics, Minsk)

Card 2/2

24 (7)

## AUTHORS:

Sevchenko, A. N., Academician, AS BSSR, SOV/20-126-5-18/69  
Gurinovich, G. P., Sarzhevskiy, A. M.

## TITLE:

On the Limit Polarization of Fluorescence (O predel'noy poliarizatsii fluorescentsii)

## PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 126, Nr 5, pp 979 - 982  
(USSR)

## ABSTRACT:

The authors first discuss the fact that the limit values of the degree of fluorescence polarization  $P_0$  do not attain the theoretical value  $P_0 = 0.5$  if all known depolarizing factors are eliminated. Further, the authors deal with a number of articles published by other authors on this field. In order to obtain the limit values of the degree of fluorescence polarization, it is necessary to eliminate Brown's rotational motion; for this purpose, solid solutions of phthalimides in polymethyl methacrylate of the concentration  $5 \cdot 10^{-6}$  g/cm<sup>3</sup> are used. The frequency dependence of the degree of emission- and absorption spectrum polarization is shown by figures 1 and 2; table 1 contains corresponding results for various compounds. Measurement of the

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SOV/20-126-5-18/69

## On the Limit Polarization of Fluorescence

polarization degree of fluorescence with the frequency  $\nu_{em} = \nu_{el}$  and excitation in various ranges of the long-wave absorption bands yielded straight line 1, in the excitation by light with the frequency  $\nu_{exc} = \nu_{el}$ , straight line 2 resulted,  $P_o(\nu_{exc})$  (straight line 3) was obtained from the observation of the fluorescence with  $\nu_2 < \nu_{el}$ ,  $P_o(\nu_{em})$  (straight line 4) in the case of excitation with  $\nu_1 > \nu_{el}$ , and straight line 5 when  $\nu_3 < \nu_{el}$  (all data given in Fig 1). Figure 2 shows the frequency dependence of the degree of emission- and absorption spectrum polarization in the case of excitation in two absorption bands which have opposite signs of fluorescence polarization. The absolute values of the degree of polarization increase both for positive and negative signs with approaching frequency of the pure electron transitions. In most cases the curves  $P_o = f(\nu_{exc})$  and  $P_o = g(\nu_{em})$  are mirror-symmetric. The absolute values of  $P_o$  in the case of excitation by light of the frequency  $\nu_{exc} = \nu_{el}$  in solid solutions attain almost the theoretical limit when the fluores-

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On the Limit Polarization of Fluorescence

SOV/20-126-5-18/69

cence of the same frequency is observed. The authors discuss in detail the fact that it attains a maximum value of 0.48 instead of 0.50 and consider possible reasons for this observation. A scheme illustrating the quantum transitions (Fig 3) is discussed as well in connection with the curves plotted in figures 1 and 2. The dependence of the polarization degree on the frequency of the exciting light within the long-wave band in the case of absorption and emission is explained by the different orientation of the dipole moments of the direct and reverse transitions (Scheme by Jablonski, Ref 7). There are 3 figures, 1 table, and 7 references, 5 of which are Soviet.

ASSOCIATION: Institut fiziki i matematiki Akademii nauk BSSR (Institute of Physics and Mathematics of the Academy of Sciences, BelorussianSSR)

SUBMITTED: March 9, 1959

Card 3/3

24(7)

SOV/20-127-6-13/51

AUTHORS: Sevchenko, A. N., Academician, AS BSSR, Gurinovich, G. P.,  
Sarzhevskiy, A. M.

TITLE:

On the Polarization of the Fluorescence of Complicated  
Molecules With Spectra Which Cannot Be Classified by the  
Rule of Mirror Symmetry

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 127, Nr 6, pp 1191-1194  
(USSR)

ABSTRACT:

V. L. Levshin showed in a paper (Ref 1) that some complicated molecules have a mirror-symmetric spectrum, and the complicated molecules are accordingly classified in molecules of first and second type. Besides, B. S. Neporent suggested a scheme with four levels for the molecules of second type. In connection with the mirror-symmetric dependence of polarization on the frequency in the molecules of first type, it would be much interesting to study this dependence for molecules of the second type in order to determine electron transitions in this way. Solid solutions of compounds with molecules of the second type were investigated for the dependence of

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SOV/20-127-6-13/51

On the Polarization of the Fluorescence of Complicated Molecules With Spectra Which Cannot Be Classified by the Rule of Mirror Symmetry

polarization of the fluorescence on the frequency of the exciting light. The experimental methods have already been described in another paper (Ref 8), and the measurement results are shown in four diagrams (Fig 1). The spectra of the absorption, of the fluorescence, and the dependence of the degree of polarization on the observation conditions and the excitation frequency are represented graphically. It is ascertained that the spectra change considerably in the transition to the solid solution. This change consists in an increase in the half widths. To investigate this more closely, polarization measurements were carried out on glycerin solutions, which showed that there is no considerable change of the polarization characteristic in the transition to solutions, but the half widths of the fluorescence bands greatly depend on the half widths of the absorption bands. Besides, the dependence of polarization on individual

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SOV/2o-127-6-13/51

On the Polarization of the Fluorescence of Complicated Molecules With Spectra Which Cannot Be Classified by the Rule of Mirror Symmetry

exciting frequencies was investigated. From the results obtained, conclusions are made concerning the inner molecule vibrations, and it is ascertained that between the directions of the dipole moments of the emission- and absorption transitions there is an angle depolarizing the fluorescence. The level scheme shown in figure 2 with the corresponding transitions is then discussed in detail, and finally it is ascertained that the scheme with four levels suggested by B. S. Neporent is not sufficient. The authors thank B. I. Stepanov for his interest in the work and the valuable discussions. There are 2 figures and 12 Soviet references.

ASSOCIATION: Institut fiziki Akademii nauk BSSR  
(Institute of Physics of the Academy of Sciences,  
Belorussian SSR)

Card 3/4

SARZHEVSKIY, A.M.

Polarization spectra of phthalimides. Dokl. AN BSSR 5 no.5,199-202  
Mys '61. (MIRA 14:5)

1. Institut fiziki AN BSSR. Predstavleno akademikom AN BSSR B.I.  
Stepanovym.  
(Phthalimide—Spectra)

SARZHEVSKIY, A.M.

Effect of temperature and viscosity on the polarization of  
fluorescence in phthalimides. Opt.i spektr. 10 no.5:621-626  
My '61. (MIRA 14:8)  
(Fluorescence) (Phthalimides) (Polarization (Light))

L 19719-63

EWP(j)/EPF(c)/EWT(m)/BDS ASD PC-4/Pr-4 RM/WW/MAY

S/2941/63/001/000/0065/0071

ACCESSION NR: AT3002197

AUTHOR: Sarzhevskiy, A. M.

X13

TITLE: Absorption and emission oscillators in the phthalamide molecule

SOURCE: Optika i spektroskopiya; sbornik statey. v. 1: Lyuminestsentsiya. Moscow, Izd-vo AN SSSR, 1963, 65-71

TOPIC TAGS: polarization spectra, dichroism, oscillator, emission, absorption

ABSTRACT: The polarization and dichroic spectra of a family of phthalamide derivatives were studied in detail for the purpose of gaining information on the absorption and emission oscillator orientations in the phthalamide molecule. The polarization spectra were investigated in glycerin at room temperature and in ethyl and isobutyl alcohol at -100°C. After studying the spontaneous fluorescence polarization spectra, the author concludes that emission and long-wave absorption oscillators lie longitudinally to the molecular axis and the short-wave absorption oscillators lie transverse to it. "The author expresses his gratitude to A. N. Sevchenko and B. I. Stepanov for their valuable advice and evaluation of the

results." *Ciz. aut. liter! 3 figures and 1 table.*

~~Card 10~~

L 10759-63 EWP(j)/EPF(c)/EWT(1)/  
EWT(m)/BDS--AFFTC/ASD--Po-4/Pr-4--RM/WH  
ACCESSION NR: AP3002789

S/0051/63/014/006/0809/0812

67  
66

AUTHOR: Gurinovich, G. P.; Sarzhevskiy, A. M.; Sevchenko, A. N.

TITLE: New data on the dependence of polarization rate on the wavelength of  
the fluorescence

SOURCE: Optika i spektroskopiya, v. 14, no. 6, 1963, 809-812

TOPIC TAGS: polarization, fluorescence, phthalimides

ABSTRACT: To prove a previous assertion of the authors that the polarization  
of complex molecules depends on the absorption and emission frequencies,  
polarization rate has been measured in several phthalimides as a function of  
excitation and luminescence wavelength. A careful analysis of the dependence  
of fluorescence spectra on excitation wavelength for 3-monomethylaminophtha-  
limide in plexiglass showed that when the compound was excited with wavelengths  
of 436, 405, and 365  $\mu\text{m}$  the emission spectra nearly coincide. The change in  
polarization rate with respect to the emission spectrum amounts to 6.5% over

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L-10759-63

ACCESSION NR: AP3002789

an interval of  $6000 \text{ cm}^{-1}$ , a magnitude in good agreement with previous data. It was shown that when 3-monomethylamino-N-methylphthalimide in glycerin was excited with wavelengths of 436 and  $405 \text{ m}\mu$  the spectra coincide; when the compound was excited with waves of  $365 \text{ m}\mu$  there is a small discrepancy, which is due to the addition of "blue" luminescence of glycerin. In this case the change in polarization rate amounts to 7% over the same interval of  $6000 \text{ cm}^{-1}$ . The change in polarization rate with respect to the fluorescence spectrum for 2-acetylanthracene in glycerin at  $20^\circ\text{C}$  and in isobutyl alcohol at  $120^\circ\text{C}$  was 8 and 13%, respectively, over the same interval. The results obtained are taken to prove the previous assertion. Orig. art. has: 3 figures.

ASSOCIATION: none

SUBMITTED: 28Jun62 DATE ACQ: 15Jul63 ENCL: 00

SUB CODE: 00 NO REF SOV: 005 OTHER: 003

Card 2/2

APANASEVICH, P.A.; BORISEVICH, N.A.; VOIOD'KO, L.V.; GLADCHENKO, L.F.;  
GRIBKOVSKIY, V.P.; GURINOVICH, G.P.; IVANOV, A.P.; KUZNETSOVA,  
V.V.; PIKULIK, L.G.; PILIPOVICH, V.A.; RUBANOV, A.S.; RUBANOV,  
V.S.; SAMSON, A.M.; SARZHEVSKIY, A.M.; SOLOV'YEV, K.N.;  
UMIREYKO, D.S.; KHAPALYUK, A.P.; YEL'YASHEVICH, M.A., akademik,  
red.

[Interaction between nonequilibrium radiation and matter]  
Vzaimodeistvie neravnovesnogo izlucheniia s veshchestvom.  
Minsk, Nauka i tekhnika, 1965. 223 p. (MIRA 18:3)

1. Akademiya nauk SSSR. Institut fiziki. Akademiya nauk Belo-  
russkoy SSR (for Yel'yashevich).

REF ID: A65146 SEC(b)-2/ENG(r)/EEG(e)-2/EWA(h)/EWA(z)/EWP(k)/ENT(1)/ENT(m)/  
Soviet Russia/1965/002/002/0142/0146  
SOURCE: Zhurnal prikladnoy spektroskopii, v. 2, no. 2, 1965, 142-146  
A. V. Tikhonov, Yu. I. Tamm, A. M. Zarzhevskiy

Abstract: Certain ruby laser characteristics in the nonstationary operation are given.

SOURCE: Zhurnal prikladnoy spektroskopii, v. 2, no. 2, 1965, 142-146

TOPIC CODE: ruby laser, nonstationary laser operation, pump power dependence, laser characteristics

The authors measured the pump waveform, the time of appearance of the first laser pulse, and the average period of the random laser power pulsations. The time of onset of stimulated emission, the time of reflection, and establishment of the laser were determined. The form of the radiation was analyzed by the method of algebraic analysis. The results of the investigation are compared with theoretical calculations. The results of the calculations are in good agreement with the experimental data. The parameters of the laser are discussed.

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L 43194-65  
ACCESSION NR: APSC10043

... and confirm the validity of the theory, which is shown to apply also to  
... the case of the passive medium. The active medium is  
... considered to be a two-layer system, in which, if possible, new data  
... are obtained. At the same time, the theory is being applied  
... to the problem of the passive medium.

ARTICLE SUMMARY: The author of this article, Dr. G. S. Kondratenko,  
art. was: 3 figures, 6 formulas, and 1 table.

ASSOCIATION: none

SUBMITTED: 10Sep64

ENCL: 00

SUB CODE: EC

NO. REF Sov: 005

OTHER: 003

ATD PRESS 3242

*βCθ*  
Card 2/2

L 2687-66 EWA(k)/FBD/EWT(1)/EWP(e)/EWT(m)/EEC(k)-2/EWP(1)/T/EWP(k)/EED-2/EWA(h)/  
ACCESSION NR: AP5021488 FCS(k)/EWA(m)-2 SCTB/UR/0368/65/003/002/0128/0133  
IJP(c) WH/WR/WG

AUTHOR: Gintoft, R. I.; Samson, A. M.; Sarzhevskiy, A. M.

TITLE: Dependence of certain ruby laser characteristics on the distance between  
the interferometer mirrors 44 44 59  
25 25,44 SB

SOURCE: Zhurnal prikladnoy spektroskopii, v. 3, no. 2, 1965, 128-133

TOPIC TAGS: ruby laser, laser pulsation, laser pumping, laser emission, laser  
theory, laser optics

ABSTRACT: This is a continuation of an earlier work by the authors (ZhPS v. 2, 142,  
1965) devoted to a study of the dependence of buildup time (time for appearance of first spike)  
and pulsation period (average time between all spikes) of a ruby laser on the pump  
energy. The study was made for the case when the reflecting coatings were depos-  
ited on the ends of the ruby rod. The present investigation concerns a laser with  
external mirrors, with a rod 6.5 mm in diameter and 81 mm long. The distance be-  
tween the interferometer mirrors could be varied from 15 to 360 cm. The buildup  
time and the pulsation period were measured at different pump powers. The results  
show that at constant power both the buildup time and the pulsation period increase  
with increasing distance between mirrors. The threshold pump energy likewise in-

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L 2687-66

ACCESSION NR: AR5021488

creases with the distance. The increase in the buildup time is attributed to an increase in the loss coefficient of the ruby. A comparison of the experimental results with the theoretical calculation confirms this assumption. It is also concluded that the results agree well with the probability-method equations derived earlier by one of the authors (Samson, Opt. i spektr. v. 16, 869, 1964 and later papers), especially with respect to the nonstationary laser emission, and that the study of the nonstationary emission makes it possible to investigate the properties of the laser, the active medium, and the pump conditions. Orig. art. has [02] 3 figures, 4 formulas, and 2 tables.

ASSOCIATION: none

SUBMITTED: 09Dec64

NO REF SOX: 004

ENCL: 00

OTHER: 000

SUB CODE: EC

ATT PRESS: 4/02

Card 2/2

L 2978-66 EWA(k)/FBD/EWT(l)/EWT(m)/EEC(k)-2/EWP(i)/T/EWP(k)/EWA(m)-2/EWA(h)

ACCESSION NR: AP5024147 SCTB/LJP(c) WG/WH UR/0250/65/009/009/0578/0580

AUTHOR: Gintoft, R. I.; Sarzhevskiy, A. M.

TITLE: The dependence of the energy yield and generation period of a ruby laser  
on the pumping energy

SOURCE: AN BSSR. Doklady, v. 9, no. 9, 1965, 578-580

TOPIC TAGS: laser, ruby laser, laser output, energy yield, laser pumping

ABSTRACT: The energy yield and generation period of a ruby laser, which normally increase with the pumping energy in the case of interferometers in which the distance L between mirrors is small, were studied for the case of large L's. The laser consisted of a polished ruby rod 8.1 cm long and 0.65 cm in diameter and plane external mirrors with a 97% reflection coefficient in which L was varied from 120 to 420 cm in 1-m steps. The oscillograms of the laser pulses were photographed for each L as a function of the supply voltage of the pump source (a 100- $\mu$ f condenser bank). The maximum pump energy was 1000 J. The experimental results indicate that both generation period and energy yield first increase up to a certain maximum which corresponds to a given pumping energy (~ 500 J) and subsequently decrease when the latter is increased. The dependence of the ruby laser generation on temperature, and the possibility of the existence of two threshold values of

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L 2978-66

ACCESSION NR: AP5024147

2

pumping energy, postulated theoretically by D. N. Vylegzhannin and M. Kh. Zelikman (Voprosy radioelektroniki, ser. 12, no. 24, 3, 1964), were not observed experimentally. However, the dependence of the energy yield and generation period of a ruby laser on temperature can be attributed hypothetically to the fact that pumping throughout a crystal, with its internal stresses and inhomogeneities, is distributed uniformly and the ends act as lenses. In the case of polished crystals, the lenses are positive and their focal lengths  $f$  vary with pumping. The higher the pumping energy the shorter the  $f$  and the higher the losses and, consequently, the lower the energy yield and generation period. The above hypothesis requires additional experimental confirmation. Orig. art. has: 2 figures. [YK]

ASSOCIATION: Institut fiziki AN BSSR (Physics Institute, AN BSSR)

SUBMITTED: 24Mar65

ENCL: 00

44 SUB CODE: EC

NO REF Sov: 001

OTHER: 000

ATD PRESS: 4109

BVK

GIMTOFT, R.I.; SAMSON, A.M.; SARZHEVSKIY, A.M.

Dependence of some characteristics of a ruby laser on the  
distance between interferometer mirrors. Zhur. prikl. spekt.  
3 no. 2:128-133 Ag '65. (MIRA 18:12)

1. Submitted Dec. 9, 1964.

1. 04563-67 EWT(1)/EWP(c)/EWT(m)/EEC(k)-2/T/EWP(k) IJP(c) WG/WH  
ACC NR: AP6032443

SOURCE CODE: UR/0368/66/005/003/0302/0305

AUTHOR: Gintoft, R. I.; Sarzhevskiy, A. M.

ORG: none

TITLE: Nonstationary generation of a laser with ground ruby

SOURCE: Zhurnal prikladnoy spektroskopii, v. 5, no. 3, 1966, 302-305

TOPIC TAGS: solid state laser, ruby laser, laser energy, laser pump

ABSTRACT: The purpose of the investigation was to determine the time behavior of a laser with ground ruby as a function of the distance between the interferometer mirrors and the pump energy, and to check on methods proposed in earlier papers (ZhPS, v. 2, 142, 1965 and v. 3, 128, 1965) for determining certain characteristics of lasers operating in the nonstationary generation mode. The experiment was made with a ruby rod 79.6 mm long and 6.5 mm in diameter at room temperature. The pump was a straight xenon flash lamp with a cylindrical reflector. Before grinding the ruby, the dependence of the threshold pump energy on the interferometer base L was determined, after which the ruby surface was ground. The interferometer base was varied from 20 to 420 cm, and the ruby was symmetrically placed relative to the mirrors. The results show that the dependence of the threshold pump energy on L is the same for ground and transparent ruby rods, and is linear in the distance between the mirrors, but a larger pump energy is needed to excite the ground ruby. The time needed to produce population inversion decreases with increasing pump energy and increases with increasing

UDC: 535.89

Card 1/2

I 04563-67  
ACC NR: AP6032443

distance between interferometer mirrors, the latter being connected with the increase in the loss factor. The pulsation time (average distance between spikes at the start of lasing) decreases with increasing pump energy and increases with increasing distance between mirrors, but by a smaller amount than for non-ground ruby rods. Slight deviations are observed in all the measured quantities from their theoretical values, and the reasons for the discrepancies are briefly discussed. Orig. art. has: 5 figures and 2 tables.

SUB CODE: 20/ SUBM DATE: 26Nov65/ ORIG REF: 006/ OTH REF: 003  
ATD PRESS: 5100

Card 2/2 vmb

L 44074-66 EWT(1)/EWP(e)/EWT(m)/EEU(k)-2/-LWII  
ACC NR: AP6030723

SOURCE CODE: UR/0368/66/005/002/0259/0260

AUTHOR: Gintoft, R. I.; Sarzhevskiy, A. M.

ORG: none

TITLE: The influence of the adjustment of the ruby<sup>15</sup> on the magnitude of the threshold pumping energy of a laser

SOURCE: Zhurnal prikladnoy spektroskopii, v. 5, no. 2, 1966, 259-260

TOPIC TAGS: ruby laser, laser energy, laser pumping

ABSTRACT: Two adjustment methods were studied. In the first, the so-called "three crosses" method, an AKT-400<sup>16</sup> autocollimator is used to superpose, in succession, the crosses of the distant mirror, the nearer plane surface of the ruby, and the nearest mirror. The position of the ruby rod in the resonator with respect to its longitudinal axis was disregarded. In the second method, the cross of the distant mirror, seen through the active material, is superposed with the cross of the nearest mirror. Since the ruby crystals are nonuniform and these nonuniformities are responsible for different refraction indexes along the crystal diameter, it is difficult to superpose the crosses. The dependence of  $E_{thr}$  (the threshold pumping energy) on  $L$  (the distance between the mirrors of the interferometer minus the length of the ruby

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ACC NR: AP6030723

rod) for the same ruby using both adjustment methods shows that with the second method the pumping threshold energy depends little on the distance. By changing the distance between the mirrors from 20 to 420 cm the pumping energy increased by only 56 joules. When the adjustment was done according to first method and the distance was changed from 20 to 360 cm, the threshold energy increased by 243 joules. In working with ruby lasers with external mirrors, the position of the ruby rod with respect to the mirrors is very important for the determination of the threshold values of the pumping energy. This is linked with the nonuniformity of the ruby crystal, which results in rays which are non-parallel with respect to the resonator mirrors. This can be compensated by using the first method of adjustment. Orig. art. has: 1 formula and 1 figure.

[JA]

SUB CODE: 20/ SUBM DATE: 20Oct65/ ORIG REF: 003/ ATD PRESS:  
5075

Card 2/2

SARZHEVSKIY, N.V., assistant.

Materials on the characteristics of goats in Kharkov Province.  
Sbor. trud. Khar'. vet. inst. 20:83-88 '49. (MLRA 9:11)  
(Kharkov Province--Goats)

SARZHEVSKIY, N. V.

"The Effect of Two Types of Feeding on the Reproductive Capacities  
of Sows and the Development of the Young." Cand Vet Sci, Khar'kov  
Veterinary Inst, Khar'kov, 1953 (RZhBiol, No 2, Sep 54)

Survey of Scientific and Technical Dissertations Defended at USSR  
Higher Educational Institutions (10)

So: Sum. No. 481, 5 May 55

SARZHEVSKIY, N.V., assistant.

Effect of two feeding methods on pig raising and the productivity of sows. Sbor. trud. Khar'. vet. inst. 22:345-355. '54. (MLRA 9:12)

1. Kafedra kormleniya sel'skokhozyastvennykh zhivotnykh Khar'kovskogo veterinarnogo instituta.  
(Swine--Feeding and feeding stuffs)

GORB, T.V., professor; PLYUSHCH, M.G., dotsent; SARZHINSKIY, N.V., kandidat  
veterinarnykh nauk.

Effect of various corn rations on the bacon and lard production of  
swine. Veterinariia 32 no.10:74-76 o '55. (MIRA 8:12)

1. Khar'kovskiy veterinarnyy institut.  
(CORN (MAIZE) (SWINE--FEEDING AND FEEDING STUFFS)

USSR / Farm Animals. Domestic Fowl.

Abs Jour: Ref Zhur-Biol., No 9, 1958, 40516.

Author : Sarzhevskiy, N. V.

Inst : Not given.

Title : The Effect of Industrial Phosphatides on Egg Production in Hens.

Orig Pub: Ptitsvodstvo, 1957, No 6, 27-28.

Abstract: The feeding of phosphatides (lecithin 25.92%, protein 34.84%, fat 28.16%, and water 11.08%) to hens of the Russian White breed, 4 g. per head daily, increased the egg production of the hens (by 15.6 eggs in 4½ months), the average egg weight (57.8 g. as against 47.2), and the incubation quality of eggs (90.1% as against 89.1%).

Card 1/1

56

SARZHEVSKIY, P.Ye

CA

2

Dependence of the electric conductivity of quartz on the electric field, the temperature, and the magnetic field. — P. Sarzhevskii. *Doklady Akad. Nauk S.S.R.*, 82, 571-4 (1952). — The elec. cond.  $\sigma$  of quartz (preliminarily subjected to electrolytic purification) follows Ohm's law only in a limited range of elec. field strengths  $E$  (up to 10 kv./cm.) at temps. above 400°. At const. temp., the dependence of  $\sigma$  on  $E$  can be described by Frenkel's formula  $\sigma = \sigma_0 e^{\beta E}$ , where  $\sigma_0$  and  $\beta$  depend on the temp. and the crystallographic direction, and vary with individual specimens. With increasing temp.,  $\sigma$  increases exponentially, whereas  $\beta$  decreases, proportionally to  $1/T$  up to 300°, and much faster at higher temps. Parallel and perpendicular to the optical axis,  $\beta_0 \sim 0.01$  and  $\beta_1 \sim 0.001$  (cm./v.)<sup>1/2</sup>; in all cases,  $\beta$  is smaller the larger is  $\sigma$ . In terms of the temp.

values of clockwise and counterclockwise flux. A nucleus of reversed magnetization was formed by making a small notch in a specimen, and this decreased the coercive force and hysteresis loss by a factor of 2. In a 180° domain boundary it was possible to make the change in spin orientations (which occurs in going from one side of the boundary to the other) have either a right- or left-hand screw relation to the application of a field of appropriate sign perpendicular

With increasing  $E$ ,  $B_1$  decreases according to  $B_1 = B_0 - b\sqrt{E}$ , in the parallel and perpendicular direction, resp.,  $B_0 = 12000^\circ\text{K}$ ,  $B_{01} \sim 11000^\circ\text{K}$ . The break of the temp. curve of  $\sigma$  in strong fields suggests different mechanisms of the cond. in the low- and high-temp. range. This was tested by measurements of the longitudinal galvanomagnetic effect, between  $H = 3000$  and 15,000 oersteds; at const.  $T$  and  $E = \text{const.}$ ,  $\Delta\sigma/\sigma = cH^2$ , with  $c \sim 10^{-10}$ - $10^{-9}$  oersted<sup>-1</sup>, depending on the temp.,  $E$ , and the crystallographic direction. At const.  $T$  and  $H$ , in weak  $E$ , the effect first is independent of  $E$ , then decreases up to about  $E = 300$  kv./cm. (approx. inversely proportionally to  $E$ ), then increases somewhat with further increasing  $E$ . In this range, considerable fluctuations of current appear, and a Hall effect is observed. At const.  $E$  and  $H$ , the longitudinal effect decreases with rising temp., and falls to below 0.0001 at 300°. Under the same conditions, the effect is greater in the direction parallel to the optical axis, and is greater in samples with a smaller  $\sigma$ . The presence of the galvanomagnetic effect in the low-temp., and its absence in the high-temp. range, are proof that the low-temp. cond. of quartz in strong  $E$  is electronic (by the sign of the Hall effect). In the high-temp. range the cond. of quartz appears to be ionic, as evidenced by electrolytic purification, absence of a galvanomagnetic effect, and presence of a portion of ohmic cond. With the aid of the relations  $\sigma = \tau n e$  and  $\Delta\sigma/\sigma = \eta\tau^2/H$ , with  $\gamma = 5$ , the mobility of the electrons  $\tau \sim 100$  cm.<sup>2</sup>/v. sec., and their concn.  $n \sim 10^{15}$ - $10^{16}$ /cc.

SARZYNSKI, T.

(DROGOWNICTWO, Vol. 8, No. 11, Nov. 1953, Warsaw, Poland)  
"Using trailer gathering machinery for earthwork in road construction." p. 238  
"A great day of young road builders." p. 290  
"New types of road surfaces exhibited at the Road Construction Exhibition." p. 290  
"Activities of the Association of Communication Engineers and Technicians." p. 292

SO: MONTHLY LIST OF EAST EUROPEAN ACCESSIONS, L.C., Vol. 3, No. 4, APRIL 1954

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001447220009-2

SAS

see also SZASSZ

(Hungarian)

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001447220009-2"

SAS, A.

Fruit Culture - Kiev Province

Collective farm orchards. Kolkh. proiz., 12, no. 5, 1952.

Monthly List of Russian Accessions, Library of Congress, November 1952. UNCLASSIFIED.

SAS, A.

Collective Farms - Polesye

Raising the level of agriculture on collective farms of Polesye in the Ukrainian S.S.R.  
Sots.sel'khoz., 23, No. 1, 1952.

Monthly List of Russian Accessions, Library of Congress, June 1952. Unclassified.

SAS, Bela

Problems of disseminating scientific knowledge of the  
socialist transformation of agriculture in Csongrad  
County. Term tud kozl 4 no. 12:571-572 D '60.

1. Vice-President, Csongrad County Division of Agricultural Sciences.

MESZAROS, Istvan; NEMES, Mihaly; SAS, Bela; GECZY, Karoly

Autumn agricultural work. Mezogazd techn 3 no.10:1-3 '63.

1. Foldmuvelesugyi Miniszterium Cepesitesi es Gepallomasi Foigazga tosaganak helyettes vezetoje (for Meszaros). 2. Mezogazdasagi Gepjavito Troszt igazgatoja (for Nemes). 3. Csorgograd megyei Tanacs Vegrehajto Bizottsaga Mezogazdasagi Osztaly vezetoje (for Sas). 4. Foldmuvelesugyi Miniszterium Allami Gazdasagok Foigazgatosaganak osztalyvezetoje (for Geczy).

SAS, Bela

Agricultural transportation and rubber tires. Mezogazd techn 4 no.9:  
20 S '64.

SAS, Bela

Accidents on collective farms. Mezogazd techn 4 no.11:25-27 '64.

POCZA, Jeno. dr.; SAS, Elemer

Birefringent crystal spheres. Fiz. szemle 8 no.8:248-249 O '58.

1. Eetves Lorand Tudomanyegyetem II.sz.Kiseleti Fizikai Intezete,  
Budapest.

POCZA, Jeno; SAS, Elemer

Simple experiments to demonstrate the resolving power of optical projection systems. Fiz szemle 9 no.8:250-251 Ag '59.

1. Eotvos Lorand Tudomanyegyetem Kiserleti Fizikai Intezete.

SAS, Elemer

Ionization chamber for demonstration. Fiz szemle 11 no.9:  
286-287 S '61.

1. Eotvos Lorand Tudomanyegyetem, Atomfizikai Tanszek.

SAS, Elemer

Results of the contest for making physical instruments  
arranged by the Chair of Nuclear Physics, Lorand Eotvos  
University. Fiz szemle 13 no.11:358 N '63.

1. Eotvos Lorand Tudomanyegyetem Atomfizikai Tanszek.

SAS,Elemer

The principle of Archimedes in physical demonstrations. Fiz  
szemle 14 no.10:326-328 O '64.

1. Chair of Nuclear Physics, Lorand Eotvos University, Budapest.

L 17665-66

ACC NR: AP6009379

SOURCE CODE: HU/0012/65/013/001/0007/0013

AUTHOR: Bezi, Istvan (Staff scientist); Sas, Gabor - Shash, G. (Staff scientist)

ORG: Research Institute for Automation, Hungarian Academy of Sciences (Magyar Tudomanyos Akademia Automatizalasi Kutato Intezet) 41 R

TITLE: Control system for the distribution of load in technological units operating in parallel 21

SOURCE: Meres es automatika, v. 13, no. 1, 1965, 7-13

TOPIC TAGS: automatic control design, automatic control system, electric power engineering, electric distribution equipment

ABSTRACT: Means for designing a control unit that enables the distribution of load between technological units coupled in parallel so that the proportion of load is appropriate and consistent during the period of operation were discussed. Several methods were theoretically explored by considering the control algorithms involved. This was followed by a detailed description of a control system found optimum on the basis of the preliminary considerations. A schematic diagram was presented for this unit and its operation and performance were discussed. Orig. art. has: 7 figures and 21 formulas. [JPRS]

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UDC: 621.016.3.062.1:621.316.728 2

L 17665-66

ACC NR: AP6009379

SUB CODE: 13, 09 / SUBM DATE: 22Oct64

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FW  
Card 2/2

OKOS, Gizella, dr.; SAS, Geza, dr.

Role of sclerosing therapy in the development of phlebothrombosis.  
Orv. hetil. 103 no. 3: 107-110 21 Ja '62.

I. Budapesti Orvostudomanyi Egyetem, IV Belklinika es Istvan-korhaz  
I Belosztaly.

(SCLEROSING SOLUTIONS toxicol)  
(THROMBOPHLEBITIS etiol)

HUNGARY

KATONA, Maria, Dr, SAS, Geza, Dr, ROMAN, Erzsebet, Dr; National Institute of Rheumatology and Baineology, II. Medical Department and Research Laboratory (Orszagos Rheuma- es Furdougyi Intezet, II. Belosztaly es Kutato Laboratorium).

"Pathological Increase in Fibrinolysis Associated with Chronic Myeloid Leukemia."

Budapest, Orvosi Hetilap, Vol 107, No 44, 30 Oct 66, pages 2096-2098.

Abstract: [Authors' Hungarian summary] Increased fibrinolysis was found as the cause of hemorrhages in a patient with chronic myeloid leukemia. The rare complication was brought under control with epsilon-aminocaproic acid and Trasylol treatment. The relationship between leukemia and pathological fibrinolysis is discussed. The patient died not as a result of hemorrhage but of septicemia. The postmortem diagnosis was tuberculotic sepsis. 4 Eastern European, 18 Western references.

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- 16 -

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SAS, Barna

Results in scarification experiments on acacia seeds. Erdo 12  
no.5:211-217 My '63.

1. Godolloi Allami Erdogazdasag erdogazdasagi felugyelje.

SAS, Gyorgy

Trade unions and the three-year development plan for national economy.  
Munka 8 no.9:9-10 S '58.

1. Szakszervezetek Orszagos Tanacsa kozgazdasagi titkarsaga kozgazdasagi  
es statisztikai csoportjanak vezetoje.

VALLO, D.; SAS, I.; PERKEDI, I.

Early diagnosis of pregnancy using the passive hemagglutination  
method. Akush. i gin. no.1:24-28. '65. (MIRA 18:10)

1. Otdel perelivaniya krovi Instituta usovershenstvovaniya  
vrachey, Budapesht.

R/009/61/000/011/001/001  
D282/D303

AUTHORS:

Manolache, Mircea, Instructor, Engineer, Bodea, Ion,  
Assistant, Engineer, Raileanu, Dumitru, Assistant,  
Engineer, and Sas, Ion, Assistant

TITLE:

On the corrosion of aluminum and its alloys

PERIODICAL:

Metalurgia si constructia de masini, no. 11, 1961,  
937-950

TEXT: The article presents the results of experiments by the authors on the corrosion of aluminum and aluminum-alloy sheets in the various conditions of the Galati and Constanta harbors. The authors used in their experiments commercial aluminum of the following composition: 0.05% Fe, 0.31% Zn, 0.03% Mg, and the rest aluminum, as well as aluminum alloyed with 5% Cu and 3% Zn. Commercial aluminum was rolled into 1.5 - 2 mm thick sheets, while aluminum alloy into 4 - 6 mm thick sheets. The following

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corrosion media were selected: (1) Danube atmosphere; (2) Danube atmosphere; (3) Black Sea water; (4) Black Sea atmosphere; (5) town atmosphere of Galati; and (6) Sea water brought into the laboratory. Since in ship or harbor constructions the aluminum generally comes into contact with other materials, the authors selected the following contact hypotheses: (1) without any contact to other material; (2) in contact with OI 38 steel; (3) in contact with copper; (4) in contact with bronze mixed with tin; (5) in contact with fir-wood; (6) in contact with zinc; and (7) in contact with oak-wood. The samples were tested with or without protection, i.e. (1) without any protection; (2) anodically oxidized; (3) painted, and (4) anodically oxidized and painted. The results obtained by the authors completely verified the modern corrosion theories. Thus, in case of commercial aluminum, an anodic dissolution was produced on the samples. This anodic dissolution was increasingly reduced due to a passivity process. In the case of samples made from aluminum alloyed with Cu and Zn, the corrosion velocity permanently increased due to the action of

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On the corrosion ...

the cathodic inclosures. A general passivity of the metal or alloy is only produced if there are some conditions of an anodic passivity of the anodic components. Knowing the appearance mechanism of the anodic passivity, the potential up to which the anode has to be polarized, can be calculated. Preliminarily oxidated aluminum samples were more electronegative; the potentials tended towards a stability, i.e. passivity; and the dissolution current had an increasing tendency. In case of aluminum samples alloyed with Cu and Zn, the potential and the current had a continuously increasing tendency. The powerful corrosion of the alloyed samples which in some cases even led to pitting, was especially due to an increase of the number and size of the cathodic inclosures. The corrosion of the commercial aluminum samples was characterized by a surface corrosion, while that of the aluminum-alloy samples by an intercrystalline corrosion. The most powerful corrosion effect on commercial aluminum samples was exerted by Black-Sea-water, while on aluminum alloy samples

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D282/D303

On the corrosion . . .

by Black-Sea and Danube waters. The average corrosion depths in the case of commercial aluminum samples was  $60\mu$ , while in case of aluminum alloy samples it was almost 0.5 mm. However, the corrosion process did not vary proportionally with the time. The corrosion velocity increased the longer the aluminum alloy samples were kept in the corroding media, and decreased the longer the commercial aluminum samples were subjected to the activity of the corroding media. The authors draw the following preliminary conclusions: (a) Commercial aluminum is less corroded than aluminum alloyed with Cu and Zn. (b) The most powerful corrosion is produced by Black-Sea water, followed by Danube water. Sea water in the laboratory produced corrosion similar to corrosions produced by the sea-atmosphere. (c) Protecting layers have only delayed the corrosion of all samples submerged in natural waters, but proved to be more efficient in the case of samples subjected to atmospheric corrosion. (d) Generally, the contact materials increased the corrosion effects

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On the corrosion ...

on the samples. (e) Most powerful corrosions were found on samples in contact with copper and bronze. (f) The decreasing order of the influence of the contact material on aluminum and aluminum-alloy samples, independently of the corroding media, was: copper, bronze, fir-wood, oak-wood, steel and zinc. (g) Zinc delayed the corrosion of aluminum and aluminum-alloys. The corrosion of all samples in the atmosphere was generally weak, superficial and uniform, being more powerful under a contact material. Red-lead proved to be a good protecting layer. Anodically oxidized and painted samples were not at all corroded, while painted samples were slightly corroded especially when being in contact with copper and bronze. There are 21 figures, 5 tables and 15 references: 11 Soviet-bloc and 4 non-Soviet-bloc. The reference to the English-language publication reads as follows: J. Sundarajan and T.L. Rama Char: "Inhibition of the Corrosion of Aluminum in Alkaline Solutions", Corrosion prevention and Control, 5, 1958, no. 5, 55-56.

Card 5/5

D'YENESH, Ishtvan [Denes, I.]; SAS, Kal'man [Sas, K.]

Theory of acids and bases. Vest.AN Kazakh.SSR 17 no.1:34-44 Ja  
'61. (MIRA 14:1)  
(Chemistry, Physical and theoretical)

SAS, Lorant

Improving structural steels by alloying with tungsten.  
Koh lap 12 no. 4/5; 163-169 Ap-My '57.

SAS, M.

"Boring in nonferrous metals." p. 223.

GEP. (Gepipari Tudomanyos Egyesulet). Budapest, Hungary.  
Vol. 11, No. 6, June 1959

Monthly list of East European Accessions (EEAI), LC, Vol. 8, No. 8,  
August 1959  
Uncla.

SAS, Men'khert

SHASH, Men'khert [Sas, Menyheit] (Vengerskaya Narodnaya Respublika)

New mechanisms used in the manufacture of machine tools.  
Stan. i instr. 34 no.1:33-34 Ja '63. (MIRA 16:2)  
(Machine tools--Design and construction)

SAS, Menyhert

New solutions in constructing machine tools. Gep 15 no.7:  
257-260 Jl '63.

1. Altalanos Geptervezo Iroda.

SAS , Menyheit

New semiautomatic single-purpose boring machines in production.  
Gepgyartastechn 2 no.1:25-26, 40 Ja '62.

1. Alitalanos Geptervezo Iroda.

SAS, M. 1948

(Obst. & Gyn Clinic, U. Szeged)

"An Intracutaneous Pregnancy Test With Colostrum."

Orvosi Hetilap. 1948 89/13(205-207)

No abst. in Exc. Med.

CA SAS, Mihaly

Pregnancy test with frogs. Mihaly Sas and Ferenc Kenyeres (Univ. Szeged, Hung.). Offst Hetlap 90, XIN-2X (1949).—*Rana esculenta* was the test animal in 710 pregnancy tests. For nonpregnant women the results were always correct. With pregnant women 6 errors occurred. The optimum period for observing sperm excretion was 120-150 min. after injection of the liquid. The method was apparently suitable for the detn. of gonadotropic hormone. 14 references. Istvan Finlay.

SAS, II.

Tumors in the retroperitoneal space. Magy. noorv. lap. 13:5, May 50.  
p. 161-9

1. Obstetric and Gynecologic Clinic (Director—Dr. Janos Batizfalvy),  
Szeged University.

CLML 19, 5, Nov., 1950

SAS, M.; KOVACS, I.; BODIS, L.; KENYEREB, F.

Effect of thiouracil on pregnancy in animals. Magy. noorv.  
lap. 14 no.7:205-208 July 1951. (CIML 20:11)

1. Doctors. 2. Obstetric and Gynecological Clinic, Szeged  
University.

SAS, M.

Frog test in diagnosis of mola hydatidos and chorionepti-  
thelioma. Orv. Hetil. Budap. 92 no.33:1072-1075 19 Aug 1951.  
(CLMI 20:11)

1. Doctor. 2. Obstetric and Gynecological Clinic (Director  
Prof. Dr. Janos Batizfalvy), Szeged University.

SAS, M.; KOVACS, I.

Hormonal diagnosis of amenorrhea. Acta med. hung. 6 no. 3-4:475-  
492 1954.

1. Klinik fur Geburtshilfe und Gynekologie der Medizinischen  
Universitat, Szeged.

(AMENORRHEA, metab. in

sex hormones excretion, diag. value)

(SEX HORMONES, metab.

excretion in amenorrhea, diag. value)

SAS, Mihaly, dr.; BOROS, Imre, dr.

Modification of the absolute eosinophil count following gynecological surgery. Magy. orrv. lap. 17 no.3:167-173 May 54.

1. A Szegedi Orvostudomanyegyetem Szuleszeti es Nogyogyaszati Klinikajának közleménye. (Igazgató: Batizfalvy János dr egyetemi tanár.)

(GENITALIA, FEMALE, surgery,  
postop. eosinophil count variations)  
(EOSINOPHIL COUNT,  
after gyn. surg.)

KOVACS, Istvan, dr.; SAS, Mihaly, dr.; URI, Edit, dr.

Result of implantation of syntestrin tablets. Magy.noorv.lap.17 no.  
6:340-344 Nov 54.

1. A szegedi Orvostudomanyegyetemi Szuleszeti es Nogyogyaszati  
klinika kozlemenye (Igazgato: Batizfalvy Janos dr. egyetemi tanar)  
(DIETHYLSILBESTROL,  
dipropionate, implantation of tablets in various dis.  
(Hun)

SAS, Mihaly, dr.

A dilution chart for follicle hormone titration (Hun). Magy.  
noorv. lap. 17 no.6:380-382 Nov 54

1. A szegedi Orvostudomanyegyetem Szuleszeti es Nogyogyaszati  
Klinikajának közleménye (Igazgató: Batisfalvy János dr. egyetemi  
tanár)  
(ESTROGENS, determ.  
dilution chart for titration (Hun).

SAS, M.,; KOVACS, I.

Determination of hormones in estrogen therapy. Acta med. hung. 7  
no.3-4:245-259 1955.

1.Klinik fur Geburtshilfe und Gynakologie der Medizinischen  
Universitat Szeged.

(ESTROGENS, administration,  
effectiveness of various modes of admin.)

SAS, Mihaly, dr.; KOVACS, Istvan, dr.

Hormonal diagnosis of amenorrhea. Magy.noorv.lap. 18 no.2:95-107  
Mar 55.

1. A Szegedi Orvostudomanyi Egyetem Szuleszeti es Nogyogyaszati  
Klinikajának közleménye (Igazgató: Batizfalvy János dr. egyetemi  
tanár).

(AMENORRHEA, differential diagnosis,  
hormonal method)

SAS, Mihaly, dr.

Result of pipet left in the abdominal cavity. Magy. noorv. lap.  
18 no. 3:185-190 May 55.

1. A Szegedi Orvostudomanyi Egyetem Szuleszeti es Nogyongyaszati  
Klinika janak kozlemenye (Igazgato: Batizfalvy, Janos dr. egyet.  
tanar).

(ABDOMEN, surgery,  
postop. compl. caused by pipet left in abdom. cavity.)

SAS, Mihaly, dr.

Use of water soluble contrast media in hysterosalpingography.  
Magy. noorv. lap 18 no.5:281-286 Sept 55.

1. A Szegedi Orvostudomanyegyetem Szuleszeti es Nogyogyaszati  
Klinikajának kozlemenye. (Igazgató: Batizfalvy, János dr.  
egyet. tanár)

(CONTRAST MEDIA

water soluble, in hysterosalpingography,  
superiority to fat soluble media.)

(GENITALIA, FEMALE, radiography

hysterosalpingography with water soluble contrast  
media, superiority to fat soluble media.)

SAS, Mihaly, dr.

Post-gestational amenorrhea. Magy. noorv. lap. 19 no.3:  
81 May 56.

1. A Szegedi Orvostud. Szuleszti es Nogyogyaszati Klinikaj. kosl.  
(igaz. Batizfalvy, Janos, dr. egyet. tanar).  
(AMENORRHEA  
post-partum, pathomechanism. & ther. (Hun))

SAS, Mihaly, dr.; PAPP, Istvan

Fetus resuscitation apparatus. Orv. hetil. 97 no.11:304-307  
11 March 56.

1. A Szegedi Orvostudomanyi Egyetem Szuleszeti es Nogyogyaszati  
Klinikajának. (igazgató: Batisfalvy, János dr. egyet. tanár)  
kozleménye.

(ASPHYXIA NEONATARUM, ther.  
resuscitation, new appar., technic & results. (Hun))  
(RESUSCITATION, appar. & instruments  
new appar. for resuscitation in asphyxia neonatarum,  
technic & results. (Hun))

SAS, M.

EXCERPTA MEDICA Sec.3 Vol.11/5 Endocrinology May 57

965. SAS M. and KOVACS I. Orvostudományegyetem Szülészeti és Nőgyógyászati Kltm., Szeged. \*Oestrogen-kezelés alatt végzett hormon titrálások tanul-ságai. Results of hormone-titration during oestrogen treatment ORV. HETIL. 1956, 97/4 (92-97) Graphs 3 Tables 4

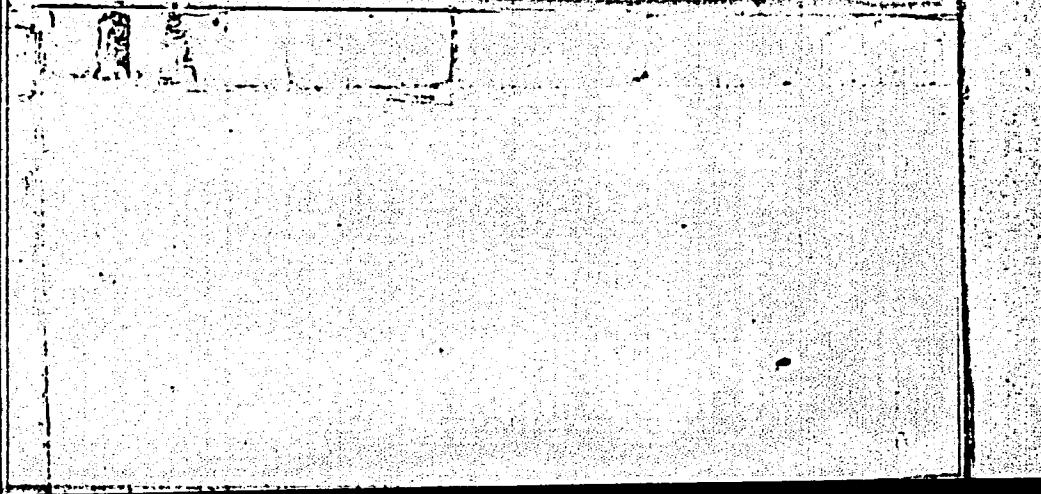
The authors studied the effectiveness of several oestrogens and the advantage of various methods of their application on the basis of excretion of biologically active oestrogen in the urine of patients in the menopause or after castration. The oral application was superior to injections and implantation. Lynoral (ethinyl oestradiol) was most effective orally; syntestrin (4:4-dioxy- $\alpha$ - $\beta$ -diethyl-stilben-dipropionate) proved most effective on injection.

Lóránd - Budapest (X. 3)

EXCEPPTA : EDITICA Sec 7 Vol 13/7 Pediatrics July 50

1500. A NEW SIMPLE APPARATUS FOR RESUSCITATION OF THE NEWBORN  
IN ASPHYXIA - Über einen neuen einfachen Apparat zur Wiederbelebung  
asphyktischer Neugeborener - Sas M. Univ.-Frauenklin., Szeged, Un-  
garn - ZBL. GYNAK. 1957, 79/45 (1758-1765) Illus. 3

An account based on the literature is given of the methods of resuscitation in as-  
phyxia neonatorum. The most effective procedure in use today is insufflation of  
oxygen under pressure. This is carried out with a number of complex apparatuses.  
The author has constructed a simple apparatus which provides a continuous flow of  
oxygen into the infant's lungs. The construction of the apparatus and its use in the  
treatment of asphyxia neonatorum are described. (VII, 10)



SAS, MIHALY

WURTERLE, Anton, dr.; SAS, Mihaly, dr., (Szeged Noi Klinika)

Causes, diagnosis, and therapeutic possibilities of virilism  
of women. Orv. hetil. 98 no.27:728-733 7 July 57.

1. A Liposi Tudomanyegyetem Szuleszeti és Nogogyszati  
Klinikajának (igazgató: Robert Schroder dr.) közlemenye.  
(ADRENOGENITAL SYNDROME  
etiol., differ. diag. & ther. (Hun))

SAS, Mihaly, Mr.

Adrenogenital syndrome (adrenal cortex hyperplasia) and prednisone therapy. Orv. hetil. 100 no.21:765-767 24 May 59.

1. A Szegedi Orvostudomanyi Egyetem Szüleszeti es Nogyogyaszati Klinikajának (Igazgató: Batizfalvy János dr. egyet tanár) kozlemenye.

(ADRENOCERITAL SYNDROME, ther.

prednisone (Hun))

(PREDNISONE, ther. use

adrenogenital synd. (Hun))

SAS, Mihaly, dr.

Studies on the clinical use of methylestrenolone. Orv.hetil.  
100 no.51:1843-1847 D '59.

1. A Szegedi Orvostudomanyi Egyetem Szuleszeti es Nogyogaszati  
Klinikajának (igazgató: Batizfalvy Janos dr. egyetemi tanár)  
kozleménye.

(GYNECOLOGICAL DISEASES ther.)  
(TESTOSTERONE rel. cpds.)

SZABO, Rezso; SAS, Mihaly; JULESZ, Miklos

Pathogenic data on Klinefelter's syndrome. Magy belgy. arch. 13 no.6:  
170-173 '60.

1. A Szegedi Orvostudomanyi Egyetem II sz. Belklinikajának (igazgató:  
dr. Julesz Miklos egyet. tanár) közleménye.

(KLINEFELTER'S SYNDROME etiol)

SZABO, R.; SAS, M.; JULESZ, M.

Klinefelter's syndrome: A contribution to its pathogenesis.  
Acta med. hung. 17 no.2:137-143 '61.

1. 2nd Department of Medicine, University Medical School, Szeged  
(director: prof. M.Julesz).  
(KLINEFELTER'S SYNDROME physiol.)

SAS, Mihaly, dr.

Pregnancy and delivery in a patient with adrenogenital syndrome  
treated with prednisone. Orv. hetil. 102 no. 18: 823-826 30 Ap '61.

1. Szegedi Orvostudomanyi Egyetem, Női Klinika.

(PREGNANCY compl)  
(ADRENOGENITAL SYNDROME in pregn)  
(PREDNISONE ther)

SZONTAGH, Ferenc; SAS, Mihaly; TRAUB, Alfred

Placental production of gonadotropins in early stages of pregnancy  
and histochemical changes of the epithelium of the trophoblast  
under the influence of sex steroids. Kiserl. orvostud. 14 no.3:  
306-313 Je '62.

I. Szegedi Orvostudomanyi Egyetem Szuleszeti es Nogyogyaszati Klinikaja.  
(GONADOTROPINS CHORIONIC metab)  
(EMBRYO pharmacol) (SEX HORMONES pharmacol)

SZONTAGH, Ferenc; SAS, Mihaly, dr.

The effect of Orga-Steron (methyl-estrenolone) on the choriogonadotropin production in early pregnancy. Magy. noorv. lap. 25 no.6: 321-324 N  
'62.

1. Szegedi Orvostudomanyi Egyetem Szuleszeti es Nogyogyaszati Klinikaja  
(Izgazgato: Szontagh Ferenc dr. egyetemi tanar)  
(PREGNANCY) (TESTOSTERONE) (GONADOTROPINS, CHORIONIC)

SZONTAGH, Ferenc, dr.; SAS, Mihaly, dr.; SZEREDAY, Zoltan, dr.; BARDOCZY,  
Arpad, dr.; KOVACS, Laszlo, dr.

Clinical evaluation of a new norsteroid 17  $\alpha$ -ethynyl-17  $\beta$ -hydroxy-  
estro-4-ene (Lynoestrenol) inhibiting ovulation. Orv. hetil. 103  
no.27:1249-1255 8 Jl '62.

1. Szegedi Orvostudomanyi Egyetem, Szuleszeti es Nogyogyaszati Klinika.

(STEROIDS ther) (OVULATION pharmacol)

SAS, Mihaly, dr.; SZELL, Istvan, dr.

Diabetes insipidus and pregnancy. Obstetrical correlations of diabetes insipidus. Orv. hetil. 103 no.35:1657-1660 2 S '62.

1. Szegedi Orvostudomanyi Egyetem, Noi Klinika.  
(PREGNANCY COMPLICATIONS) (DIABETES INSIPIDUS)

HUNGARY

SAS, M., Dr; Medical University, Clinic of Gynecology (Orvostudomanyi Egyetem, Nöi Klinika), Szeged.

"Possible Effects of Drug Treatment of Pregnant Women on the Fetus. Iatrogenic Fetal Damage."

Budapest, Orvosi Hetilap, Vol 103, No 52, 30 Dec 62, pp 245-245.

Abstract: [Author's Hungarian summary] Interest in iatrogenic fetal damage is increasing. It is estimated that one to two thousand malformed infants were born in recent years. The article contains a review of foreign literature concerning those drugs which may cause fetal damage. Such drugs may cause embryopathy or fetopathy or the development of lethal disease in the new-born. Of 95 references, 6 are Hungarian, the rest Western.

1/1

NAGY, Sandor, dr.; SAS, Mihaly, dr.

Uterine hemorrhage induced by sex steroids as a pregnancy test.  
Magy. noorv. lap. 26 no.1:42-46 Ja '63.

1. A Szegedi Orvostudomanyi Egyetem Noi Klinikajának kozlemenye  
(Igazgató: Szontagh Ferenc dr. egyetemi tanár).  
(PREGNANCY TESTS) (PROGESTERONE) (ESTRADIOL)  
(DIETHYLSTILBESTROL) (AMENORRHEA) (ESTROGEN) (GONADOTROPINS)